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**CLASSROOM MANAGEMENT STRATEGIES AND
MOTIVATION FOR TEACHING TOWARDS TEACHING
EFFECTIVENESS AMONG PHYSICAL EDUCATION
TEACHERS IN SOUTHERN THAILAND**



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**DOCTOR OF PHILOSOPHY
UNIVERSITI UTARA MALAYSIA
2019**



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Abstrak

Pendidikan jasmani sekolah rendah merupakan kursus penting untuk pembangunan fizikal, emosi, rohani dan intelektual para pelajar di Thailand. Walau bagaimanapun, didapati bahawa ia tidak seberapa berkesan seperti yang diharapkan oleh Kementerian Pendidikan. Ramai guru dilaporkan tidak dapat menguruskan kelas dengan cekap, tidak diberi motivasi untuk mengajar dan tidak dapat mengajar dengan berkesan. Oleh itu, kajian perlu dijalankan untuk memahami dan menguruskan masalah tersebut. Objektif kajian ini adalah untuk mengkaji tahap strategi pengurusan bilik darjah (CMS) Pendidikan Jasmani, motivasi pengajaran (MT), dan keberkesanan pengajaran (TE) kalangan guru-guru di Selatan Thailand. Di samping itu, ia adalah untuk mengkaji hubungan penting antara CMS Pendidikan Jasmani, MT, dan TE serta untuk meneroka sama ada MT memainkan peranan sebagai pengantara antara CMS Pendidikan Jasmani dan TE dalam kalangan guru-guru di Thailand Selatan. Penyelidikan berbentuk tinjauan dijalankan ke atas 258 guru Pendidikan Jasmani sekolah rendah di Selatan Thailand. Instrumen terdiri daripada tiga soal selidik (strategi pengurusan bilik darjah, penilaian diri terhadap keberkesanan guru dalam pendidikan jasmani, dan motivasi autonomi untuk mengajar). Hasil kajian mendapati tahap CMS Pendidikan Jasmani ($M = 4.06$, $S.D. = .37$), MT ($M = 4.02$, $S.D. = .47$), dan TE ($M = 3.93$, $S.D. = .47$) adalah tinggi. Tambahan pula, kajian ini mendapati terdapat hubungan yang signifikan antara: CMS Pendidikan Jasmani dan MT ($\beta = .44$, $p = <.05$); CMS dan TE ($\beta = .44$, $p = <.05$); MT dan TE ($\beta = .36$, $p = <.05$). Kajian ini juga mendapati bahawa MT memainkan peranan sebagai pengantara penting antara CMS Pendidikan Jasmani dan TE dalam kalangan guru-guru di Thailand Selatan ($\beta = .16$, $p = <.05$). Dari hasil kajian, disyorkan bahawa untuk meningkatkan keberkesanan pengajaran Pendidikan Jasmani, guru Pendidikan Jasmani harus meningkatkan keupayaan mereka dalam strategi pengurusan kelas dan mengembangkan motivasi intrinsik mereka dalam pengajaran.

Kata kunci: Strategi pengurusan bilik darjah, Motivasi untuk mengajar, Keberkesanan pengajaran, Pendidikan jasmani, Selatan Thailand.

Abstract

Physical education in primary school is an essential course for developing the physical, emotional, spiritual and intellectual aspects of Thai students. However, through various reports, The Ministry of Education has found it to be ineffective. Further investigation it was found that many of the teachers were unable to manage classes efficiently, unmotivated to teach and unable to teach effectively. Therefore, research should be conducted to understand and manage those problems. The objectives of this study are to identify the level of classroom management strategies (CMS), the level of motivation for teaching (MT), and the teaching effectiveness (TE) among physical education teachers in Southern Thailand. Additionally, it also aims to examine the significant relationship between CMS, MT, and TE as well as to investigate whether MT plays the role of mediating effect on the relationship between CMS and TE among physical education teachers in Southern Thailand. Survey research design was conducted on 258 physical education primary school teachers in Southern Thailand. The instruments consisted of three questionnaires (classroom management strategies questionnaire, self-evaluation of teacher effectiveness questionnaire in physical education, and autonomous motivation for teaching questionnaire). The findings found that the level of CMS ($M=4.06$, $S.D.=.37$), MT ($M=4.02$, $S.D.=.47$), and TE ($M=3.93$, $S.D.=.47$) are high. Furthermore, this study found that there is a significant relationship between: CMS and MT ($\beta=.44$, $p<.05$); CMS and TE ($\beta=.44$, $p<.05$); MT and TE ($\beta=.36$, $p<.05$). This study also found that MT plays an important role as the mediating effect between CMS and TE among physical education teachers in Southern Thailand. ($\beta=.16$, $p<.05$). From these findings, it is recommended that to improve physical education's teaching effectiveness, physical education teachers should enhance their ability in classroom management strategies and develop their intrinsic motivation in teaching.

Keywords: Classroom management strategies, Motivation for teaching, Teaching effectiveness, Physical Education Teachers, Southern Thailand.

Acknowledgement

First and foremost, I express my indebtedness and most profound gratitude to my supervisors Prof. Dr. Mohd Sofian Bin Omar-Fauzee and Prof. Madya Dr. Fuazi Bin Hussin for their valuable guidance, scholarly suggestions, supports and ideas at every stages that motivated me to carry out this research work in the right track to successfully on time. Their willingness to give their time so generously has been very much appreciated as well as for their patient guidance, enthusiastic encouragement and useful critiques of this research work.

Secondly, I express my deep sense of gratitude to my mother, brother, father and mother in law who supported and encouraged me until the end of my dream.

I also express my heartfelt thanks to Dr. Hareesol Khun-Inkeeree for her stimulating, invaluable guidance, supportive from the beginning till the end of this process.

Also, I extend my sincere thanks to Dr. Amrita Kaur, Dr. Puteri Darishah Bt Dali, Mr. Boonyarit Omanee, Dr. Adelaja Ayotunde Adetola, Staffs of sports center and Petanque club at UUM assistance for being a true friend and extended their constant support, gave me inspiration to finished.

Finally, I express my beloved my wife, Mrs. Phachara Tulyakul and my daughters, Sirirat and Sirilak Tulyakul who always give me encouragement and undeniable support during the PhD journey.

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List of Abbreviations

AVE	Average Variance Extracted
CMS	Classroom Management Strategies
CMS c	Classroom Management Strategies Corrective Strategies
CMS p	Classroom Management Strategies Preventive Strategies
CMS s	AVE Classroom Management Strategies Support Strategies
CMV	Common Method Variance
HTMT	The heterotrait - monotrait ratio
IPE	Institute of Physical Education
ITTM	The Inverted Triangle Teacher Motivation Model
KMO	Kaiser-Meyer-Olkin
MT	Motivation for Teaching
MT iden	Motivation for Teaching Identifies Motivation,
MT in	Motivation for Teaching Intrinsic Motivation
MT itro	Motivation for Teaching Introjected Motivation
MT ex	Motivation for Teaching External Motivation
OBEC	Office of the Basic Education Commission
PE	Physical Education
PLS-SEM	The Partial Least Squares-Structural Equation Modeling
S.D.	Standard Deviation
SETEQ-PE	The Self-Evaluation of Teacher Effectiveness Questionnaire in Physical Education
SPSS	The Statistical Package Social Science
TE	Teaching Effectiveness
TE app	Teaching Effectiveness Application of PE content
TE ass	Teaching Effectiveness Student and Teacher Assessment
TE en	Teaching Effectiveness Learning environment
TE less	Teaching Effectiveness Lesson implementation
TE tno	Teaching Effectiveness Use of Technology.
TE ts	Teaching Effectiveness Teaching Strategies
VIF	Variance Inflation Factors

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CHAPTER ONE

INTRODUCTION

1.1 Introduction

Physical education is an excellent way through which students can practice healthy lifestyle and increase their productivity (Pate, Flynn & Dowda, 2016). This is because physical education employs physical activities, games, and sports to facilitate teaching and increase students' participation in the activities (Ministry of Education Thailand, 2008). Thus, physical education can be a life-changing experience for students as it offers them not only the opportunity to improve their mind and bodies, but their skills as well. These of course lead towards students' accomplishments in both physical and cognitive aspects of education (Rost, 2016). It is known that lack of physical activity may lead to obesity and some other health-related issues among children. Therefore in order to overcome physical inactivity among children, it is necessary to enquire into the efficiency of teaching physical education.

This current study is focused on students in primary school it is where students attain, and are taught basic movement and knowledge that are beneficial for their next education level (Ko, 2016). The objectives of physical education in primary school in Thailand are to equip students with basic knowledge and skills that are deemed crucial for their daily living adjustment to social changes, good mental and physical health, effective working, participation in physical activities and desire to exercise [Office of the Basic Education Commission (OBEC), 2008].

Thus, in order to increase the effectiveness of physical education teachers, this study seeks to examine classroom management strategies as classroom is the place where

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Appendix A

Appendix A. Questionnaire



For the physical education teacher in primary school. The purpose of this questionnaire is to investigate the level of classroom management strategies, teaching effectiveness, and motivation for teaching in physical education teacher in primary school at Southern Thailand.

Direction: Read the following statements and tick (✓) the response that indicates your feelings.

The questionnaire there are five parts (62 items) follow as:

Part A: Background Information.

Part B: Classroom Management Strategies (1-20 items)

Part C: Teaching Effectiveness (21-46 items)

Part D: Teacher Motivation for Teaching (47-62 items)

Using a Likert –type scale and select the number on the scale 1-5 that best represents your degree of commitment.

Part A: Background Information

1. Gender: ☐ Male ☐ Female Age: Years old
2. Teaching Experience..... Years old
3. Salary ☐ Less than 16,840 ☐ 16,841 – 29,700 ☐ 29,701 – 36,020
 ☐ 36,021 – 50,550 ☐ 50,551 – 59,770 ☐ More than 59,771
4. Position Status
- ☐ Part Time Employee ☐ Permanent Employee ☐ Government Employee
- ☐ Teacher Assisstant ☐ Government Teacher Employee ☐ Other.....
5. Academic Title ☐ No ☐ Professional Level Teachers
- ☐ Senior Professional Level Teachers ☐ Expert Level Teachers
- ☐ Advisory Level Teachers ☐ Other.....
6. Name of Institute the graduated ☐ IPE. (Campus).....
- ☐ University
- ☐ Rajabhat University
7. Name of Major the graduated ☐ Physical Education ☐ Sport Science
- ☐ Health Educatio ☐ Early Childhood Education/ Elementary Education
- ☐ Others Please Specify.....

Part B: Classroom Management Strategies (1-20 items)

Please select the number below that the best represents how you feel about yours
utilize the Classroom Management Strategies

1 = Never, 2=Rarely, 3 = Every once in a while, 4 = Sometime, 5 = Almost Always

No.	Items	Level				
		1	2	3	4	5
	Preventive Strategies					
1	Positive relationships					
2	Effective communication					
3	Active listening					
4	Being genuine					
5	Clear expectations					
6	Clear directions					
7	Effective movement management					
8	Praise and encouragement					
9	Communicating understanding					
	Supportive Strategies					
10	Using logical consequences					
11	Humour					
12	Wittiness					
13	Rules					
14	Commands and orders					
15	Proximity control					
16	Desists					
	Corrective Strategies					
17	Contracts					
18	Detention					
19	Timeout/exclusion					
20	Parent referrals					

Part C: Teaching Effectiveness (21-46 items)

Please select the number below that the best represents how you feel about yours
utilize the Teaching Effectiveness

1 = Never, 2=Rarely, 3 = Every once in a while, 4 = Sometime, 5 = Almost Always

No.	Items	Level				
		1	2	3	4	5
	Learning Environment					
21	Do you individualize your teaching so that each of your students improves emotionally and socially?					
22	Do you individualize your teaching so that each of your students improves kinetically?					
23	Do you individualize your teaching so that each of your students improves cognitively?					
24	Is student safety (physical, emotional, social guaranteed during your lesson?)					
25	Do you modify your lesson plan to ensure motivation, progress, and safety to students?					
	Student and Teacher Assessment					
26	Do students participate in the evaluation of your teaching (e.g., with a questionnaire)?					
27	Do you involve your students in the evaluation of their classmates?					
28	Do you invite your colleagues to evaluate your teaching?					
29	Do you use techniques to evaluate students cognitively and socially (e.g., multiple choice questions, rubrics)?					
30	Do you use other techniques (e.g., evaluation during game, evaluation scales, and rubrics) for the motor evaluation of students?					
	Application of the Content of Physical Education					
31	Do you teach tactics, rules, and regulations of educational and sport games?					
32	Do you integrate issue like nutrition, obesity, smoking, drugs, and tactics in your teaching?					

No.	Items	Level				
		1	2	3	4	5
33	Do your students acquire knowledge and skills from other subjects (e.g., Language, Mathematics, Geography, and History) through your lesson?					
34	Do you teach techniques (e.g., of skills, physical fitness, etc.)?					
Use of Technology						
35	Do you use video for teaching?					
36	Do you make use of the computer to teach?					
37	Do you assign tasks that require students to search for information on the internet?					
38	Do you use video and voice recorder to evaluate your teaching?					
Teaching Strategies						
39	Do you communicate with the students using clear and concise speech, rhythm, signs-gestures?					
40	Do you employ student-centered teaching styles (e.g., exploration, problem solving, etc.) according to learning objectives and student need?					
41	Apart from partial and whole practice, do you employ methods of group/random, constant/varying practice?					
42	Do you use a wide variety of media (e.g., tables, poster, music, cards)?					
Lesson Implementation						
43	Do you inform your students about what they are going to learn?					
44	Does your teaching plan involve objectives and specific movement, cognitive, and social goals for each class?					
45	Do you have a teaching plan for each lesson?					
46	Do you demonstrate objectives to be learned, when it is required by the course?					

Part: D Teacher motivation for teaching (47-62 items)

Please select the number below that the best represents how you feel about yours

Motivation for teaching

1 = Strongly Disagree, 2= Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

No.	Items	Level				
		1	2	3	4	5
	External Regulation					
47	When I devote time to individual talks with students, I do so because I want the parents to appreciate my knowledge and familiarity with their children.					
48	When I try to find interesting subjects and new ways of teaching, I do so because I want the parents to be satisfied so they won't complain.					
49	When I invest effort in my work as a teacher, I do so because I do not want the principal to follow my work too closely.					
50	When I invest effort in my work as a teacher, I do so in order to prevent disruptions and discipline problems during the lessons.					
	Introjected Regulation					
51	When I try to find interesting subjects and new ways of teaching, I do so because I think it is a shame to keep on teaching in the same way all the time.					
52	When I invest effort in my work as a teacher, I do so because if I do not invest enough I would feel ashamed of myself.					
53	When I invest effort in my work as a teacher, I do so because otherwise I would feel guilty.					
54	When I devote time to individual talks with students, I do so because it makes me feel proud to do this.					

No.	Items	Level				
		1	2	3	4	5
	Identified Regulation					
55	When I try to find interesting subjects and new ways of teaching, I do so because it is important for me to keep up with innovations in teaching.					
56	When I devote time to individual talks with students, I do so because I can learn from them what happens in the classroom.					
57	When I invest effort in my work as a teacher, I do so because it is important for me to make children feel that I care about them.					
58	When I invest effort in my work as a teacher, I do so because it is important for me to feel that I help people.					
	Intrinsic Regulation					
59	When I try to find interesting subjects and new ways of teaching, I do so because it is fun to create new things.					
60	When I invest effort in my work as a teacher, I do so because I enjoy finding unique solutions for various students.					
61	When I invest effort in my work as a teacher, I do so because I enjoy creating connections with people.					
62	When I devote time to individual talks with students, I do so because I like being in touch with children and adolescents.					



เรียน ผู้ตอบแบบสอบถาม

แบบสอบถามฉบับนี้ ได้จัดทำขึ้นเพื่อสอบถามระดับของการใช้กลยุทธ์ในการจัดการ ในชั้นเรียน ประสิทธิภาพการสอน และ แรงจูงใจในการสอน สำหรับครูที่สอนวิชา พลศึกษาในโรงเรียน ประถมศึกษา ขนาดใหญ่ สังกัดสำนักงานคณะกรรมการการศึกษาขั้นพื้นฐาน ใน 14 จังหวัด ภาคใต้

การตอบแบบสอบถามนี้ จะไม่มีผลกระทบต่อผู้ตอบแบบสอบถามแต่อย่างใด แต่จะเป็นประโยชน์ ในกระบวนการการศึกษา เพื่อเพิ่มประสิทธิภาพ พัฒนาผู้สอนและผู้เรียน ต่อไป ผู้วิจัยขอขอบคุณ ในความร่วมมือของผู้ตอบแบบสอบถามเป็นอย่างสูง

คำชี้แจง กรุณาทำเครื่องหมาย ✓ ลงชื่อในช่องที่ตรงกับความเป็นจริงของผู้ตอบแบบสอบถาม มากที่สุด ดังนี้

- 1 หมายถึง ตรงกับความเป็นจริง น้อยที่สุด
- 2 หมายถึง ตรงกับความเป็นจริง น้อย
- 3 หมายถึง ตรงกับความเป็นจริง ปานกลาง
- 4 หมายถึง ตรงกับความเป็นจริง มาก
- 5 หมายถึง ตรงกับความเป็นจริง มากที่สุด

แบบสอบถามมีทั้งหมด 4 ตอน 62 ข้อ ดังต่อไปนี้:

- ตอนที่ 1 ข้อมูลส่วนตัวของผู้ตอบแบบสอบถาม
ตอนที่ 2 กลยุทธ์ในการจัดการในชั้นเรียน (ข้อ 1 - 20)
ตอนที่ 3 ประสิทธิภาพในการสอน (ข้อ 21 - 46)
ตอนที่ 4 แรงจูงใจในการสอน (ข้อ 47 - 62)

ตอนที่ 1 ข้อมูลส่วนตัวของผู้ตอบแบบสอบถาม

1. เพศ ☐ ชาย ☐ หญิง อายุ.....ปี
2. ประสบการณ์ในการสอน.....ปี
3. เงินเดือนปัจจุบัน ☐ ต่ำกว่า 16,840 ☐ 16,841 – 29,700 ☐ 29,701 – 36,020
☐ 36,021 – 50,550 ☐ 50,551 – 59,770 ☐ มากกว่า 59,771
4. สถานะตำแหน่งในปัจจุบัน ☐ ลูกจ้างชั่วคราว ☐ ลูกจ้างประจำ ☐ พนักงานราชการ
☐ ครูผู้ช่วย ☐ ข้าราชการครู ☐ อื่นๆ.....
5. ตำแหน่งครูวิทยฐานะ ☐ ไม่มีวิทยฐานะ ☐ ครูชำนาญการ ☐ ครูชำนาญการพิเศษ
☐ ครูเชี่ยวชาญ ☐ ครูเชี่ยวชาญพิเศษ ☐ อื่นๆ (ระบุ).....
6. สถาบันที่เรียนจบ ☐ สถาบันการพลศึกษา วิทยาเขต.....
☐ มหาวิทยาลัย.....
☐ มหาวิทยาลัยราชภัฏ.....
7. สาขาวิชาเอกที่เรียนจบ ☐ วิชาเอกพลศึกษา ☐ วิชาเอกวิทยาศาสตร์การกีฬา
☐ วิชาเอกสุขศึกษา ☐ วิชาเอกปฐมวัย/ประถมศึกษา ☐ อื่น ๆ (ระบุ).....

ตอนที่ 2 การใช้กลยุทธ์ในการจัดการในชั้นเรียน (ข้อ 1 - 20)

คำชี้แจง กรุณาทำเครื่องหมาย ✓ ลงชื่อในช่องที่ตรงกับความเป็นจริงของผู้ตอบแบบสอบถามมากที่สุด ดังนี้ 1 = น้อยที่สุด, 2 = น้อย, 3 = ปานกลาง, 4 = มาก, 5 = มากที่สุด

ข้อที่	รายการ	ระดับความจริง				
		1	2	3	4	5
	การใช้กลยุทธ์ในการป้องกัน					
1	ใช้ความสัมพันธ์ในเชิงบวกกับนักเรียน					
2	ใช้การสื่อสารอย่างมีประสิทธิภาพ					
3	ใช้การฟังอย่างตั้งใจ					
4	ใช้ความจริงใจ					
5	มีความคาดหวังที่ชัดเจน					
6	มีทิศทางที่ชัดเจน					
7	มีการจัดการเคลื่อนไหวที่มีประสิทธิภาพ					
8	ใช้การยกย่องและให้กำลังใจ					
9	ใช้การสื่อสารด้วยความเข้าใจ					
	การใช้กลยุทธ์ในการสนับสนุน					
10	ใช้การตัดสินใจด้วยเหตุผล					
11	ใช้อารมณ์ขันในการสอน					
12	ตระหนักและรับรู้กับสิ่งที่เกิดขึ้นในห้องเรียนอยู่ตลอดเวลา					
13	ใช้กฎกติกา					
14	ใช้คำสั่งและการจัดระเบียบวินัย					
15	ใช้การดูแลอย่างใกล้ชิด					
16	ใช้คำพูดหยุดยั้งจากการปฏิบัติที่ไม่ถูกต้อง					
	การใช้กลยุทธ์ในการแก้ไข					
17	ให้สัญญาหรือข้อตกลง					
18	ใช้การจำกัดพื้นที่					
19	ใช้การหยุดพักชั่วคราว/ไล่ออกนอกห้อง					
20	มีการอ้างถึงผู้ปกครองของนักเรียน					

ตอนที่ 3 ประสิทธิภาพในการสอน (ข้อ 21 - 46)

คำชี้แจง กรุณาทำเครื่องหมาย ✓ ลงชื่อในช่องที่ตรงกับความเป็นจริงของผู้ตอบแบบสอบถามมากที่สุด ดังนี้ 1 = น้อยที่สุด, 2 = น้อย, 3 = ปานกลาง, 4 = มาก, 5 = มากที่สุด

ข้อที่	รายการ	ระดับความจริง				
		1	2	3	4	5
	สภาพแวดล้อมของการเรียนรู้					
21	ครูใช้การสอนที่แตกต่างกัน เพื่อให้ให้นักเรียนแต่ละคน พัฒนาทางด้านอารมณ์และสังคม					
22	ครูใช้การสอนที่แตกต่างกัน เพื่อให้ให้นักเรียนแต่ละคน พัฒนาด้านการเคลื่อนไหว					
23	ครูใช้การสอนที่แตกต่างกัน เพื่อให้ให้นักเรียนแต่ละคน พัฒนาองค์ความรู้					
24	แน่ใจหรือไม่ว่า ช่วงเวลาที่สอน นักเรียนจะมีความปลอดภัย (ทางกาย อารมณ์ และสังคม)					
25	ครูได้ปรับเปลี่ยนแผนการจัดการเรียนรู้ เพื่อให้แน่ใจว่านักเรียน มีแรงจูงใจ มีความก้าวหน้าและมีความปลอดภัย					
	การประเมินครูและนักเรียน					
26	นักเรียนมีส่วนร่วมในการประเมินด้านการสอนของครูหรือไม่ (เช่น การตอบแบบสอบถาม)					
27	นักเรียนได้มีส่วนร่วมในการประเมินเพื่อนร่วมชั้นเรียนของพวกเขาหรือไม่					
28	ครูได้เชิญเพื่อนร่วมงานมาประเมินผลการสอนด้วยหรือไม่					
29	ครูได้ใช้เทคนิคในการประเมินองค์ความรู้และด้านสังคมของนักเรียน (เช่น คำถามแบบตัวเลือก)					
30	ครูได้ใช้เทคนิคอื่นๆ (เช่น การประเมินระหว่างเล่นเกมส์, ระดับการประเมิน, เกณฑ์การประเมิน rubric) สำหรับการประเมินทางกลไกของนักเรียน หรือไม่					

ตอนที่ 3 ประสิทธิภาพในการสอน ต่อ

ข้อที่	รายการ	ระดับความจริง				
		1	2	3	4	5
	การประยุกต์เนื้อหาของวิชาพลศึกษา					
31	ครูได้สอนแทกติก (ชั้นเชิง) กฎกติกา และข้อบังคับของการศึกษา เกมส์และ กีฬาหรือไม่					
32	ครูได้บูรณาการประเด็นเกี่ยวกับโภชนาการ ความอ้วน การสูบบุหรี่ สารเสพติด และแทกติกในการสอนหรือไม่					
33	นักเรียน ได้รับความรู้และทักษะของวิชาอื่นๆ หรือไม่ (เช่น ภาษา คณิตศาสตร์ ภูมิศาสตร์ ประวัติศาสตร์) ผ่านบทเรียนของครูผู้สอน					
34	ครูได้สอนเทคนิคอื่นๆ หรือไม่ (เช่น ทักษะ, สมรรถภาพทางกาย เป็นต้น)					
	การใช้เทคโนโลยี					
35	ครูใช้วีดีโอในการสอนหรือไม่					
36	ครูใช้คอมพิวเตอร์ในการสอนหรือไม่					
37	ครูได้มอบหมายงานที่ต้องการให้นักเรียนค้นหาข้อมูลทางอินเทอร์เน็ตหรือไม่					
38	ครูได้ใช้การบันทึกวีดีโอและเสียงเพื่อการประเมินผลด้านการสอน หรือไม่					
	กลยุทธ์ของการสอน					
39	ครูใช้การสื่อสารกับนักเรียน โดยใช้คำพูดที่ชัดเจนและรัดกุม เป็นจังหวะ และมีลักษณะท่าทางประกอบการ อธิบายหรือไม่					
40	ครูใช้การสอนแบบนักเรียนเป็นศูนย์กลางหรือไม่ (เช่น การสำรวจ การแก้ปัญหา) ตามตัวชี้วัดและ สิ่งที่ต้องการ					

ตอนที่ 3 ประสิทธิภาพในการสอน ต่อ

ข้อที่	รายการ	ระดับความจริง				
		1	2	3	4	5
41	นอกเหนือจากการฝึกปฏิบัติรายกลุ่ม ครูได้มีการสุ่ม เพื่อฝึกปฏิบัติรายบุคคลหรือไม่					
42	ครูได้ใช้สื่อที่หลากหลายหรือไม่					
	การดำเนินการตามเนื้อหาบทเรียน					
43	ครูได้แจ้งเนื้อหาเกี่ยวกับสิ่งที่พวกเขาจะเรียนรู้หรือไม่					
44	แผนการจัดการเรียนรู้ของครู เกี่ยวข้องกับวัตถุประสงค์และการเคลื่อนไหว องค์ความรู้ และวัตถุประสงค์ทางสังคม สำหรับ แต่ละชั้นเรียนหรือไม่					
45	ครูมีแผนการจัดการเรียนรู้ในแต่ละบทเรียนหรือไม่					
46	ครูได้แจ้งวัตถุประสงค์ในการเรียนรู้ เพราะมันเป็นสิ่งที่จำเป็นในหลักสูตรหรือไม่					

ตอนที่ 4 แรงจูงใจในการสอน (ข้อ 47 - 62)

คำชี้แจง กรุณาทำเครื่องหมาย ✓ ลงชื่อในช่องที่ตรงกับความเป็นจริงของผู้ตอบแบบสอบถาม

มากที่สุด ดังนี้ 1 = น้อยที่สุด, 2 = น้อย, 3 = ปานกลาง, 4 = มาก, 5 = มากที่สุด

ข้อที่	รายการ	ระดับความจริง				
		1	2	3	4	5
	แรงจูงใจภายนอก					
47	เมื่อฉันอุทิศเวลางานให้กับนักเรียนแต่ละคน ฉันทำเช่นนั้น เพราะ ฉันต้องการให้ผู้ปกครองประทับใจในความรู้และความคุ้นเคยกับลูกของพวกเขา					
48	เมื่อฉันหาหัวข้อที่น่าสนใจและวิธีการสอนแนวใหม่ ฉันทำเช่นนั้นเพราะ ฉันต้องการให้ผู้ปกครองพอใจ โดยที่พวกเขาจะได้ไม่ตำหนิใส่ฉัน					

ตอนที่ 4 แรงจูงใจในการสอน ต่อ

ข้อที่	รายการ	ระดับความจริง				
		1	2	3	4	5
49	เมื่อฉันทุ่มเทในการทำหน้าที่ครู ฉันทำเช่นนั้นเพราะ ฉัน ไม่ต้องการให้หัวหน้ามาตรวจสอบการทำงานของฉันจนเกินไป					
50	เมื่อฉันทุ่มเทในการทำหน้าที่ครู ฉันทำเช่นนั้น เพื่อที่จะป้องกันปัญหาการก่อวินาศกรรมและระเบียบวินัยระหว่างการสอน					
	<u>แรงจูงใจที่ถูกกดดันให้ยินยอม</u>					
51	เมื่อฉันหาหัวข้อและวิธีการสอนแนวใหม่ ฉันทำเช่นนั้นเพราะ ฉันคิดว่ามันเป็นเรื่องน่าอายที่จะให้ การเรียน การสอนของฉัน เป็นแบบเดิมๆ ตลอดเวลา					
52	เมื่อฉันทุ่มเทในการทำหน้าที่ครู ฉันทำเช่นนั้นเพราะ ถ้าฉันไม่ ทุ่มเทพอ ฉันจะรู้สึกอายใจต่อตนเอง					
53	เมื่อฉันทุ่มเทในการทำหน้าที่ครู ฉันทำเช่นนั้นเพราะ มิฉะนั้น ฉันต้องรู้สึกผิด					
54	เมื่อฉันอุทิศเวลางานให้กับนักเรียนแต่ละคน ฉันทำเช่นนั้นเพราะ มันทำให้ฉันรู้สึกภาคภูมิใจในการทำ เช่นนี้					
	<u>แรงจูงใจที่เห็นความสำคัญด้วยตัวเอง</u>					
55	เมื่อฉันหาหัวข้อที่น่าสนใจและวิธีการสอนแนวใหม่ ฉันทำเช่นนั้นเพราะ มันเป็นสิ่งสำคัญสำหรับฉัน ที่จะให้มี ความทันสมัย ในการเรียนการสอน					
56	เมื่อฉันทุ่มเทเวลางานให้กับนักเรียนแต่ละคน ฉันจะทำเช่นนั้นเพราะ ฉันสามารถเรียนรู้จากสิ่งที่เกิดขึ้นกับพวกเขาในชั้นเรียน					
57	เมื่อฉันทุ่มเทในการทำหน้าที่ครู ฉันทำเช่นนั้นเพราะ มันเป็นสิ่งสำคัญที่ฉัน ได้ทำให้นักเรียนรู้สึก ว่า ฉัน ได้ดูแล พวกเขาดี					

ตอนที่ 4 แรงจูงใจในการสอน ต่อ

ข้อที่	รายการ	ระดับความจริง				
		1	2	3	4	5
58	เมื่อฉันทุ่มเทในการทำหน้าที่ครู ฉันทำเช่นนั้นเพราะ มันเป็นสิ่งสำคัญสำหรับฉันต่อความรู้สึกว่า ฉันได้ช่วยเหลือผู้คน					
	แรงจูงใจภายใน					
59	เมื่อฉันหาหัวข้อที่น่าสนใจและวิธีการสอนแนวใหม่ ฉันทำเช่นนั้นเพราะ มันเป็นเรื่องที่สนุกในการออกแบบ สิ่งใหม่ๆ					
60	เมื่อฉันทุ่มเทในการทำหน้าที่ครู ฉันทำเช่นนั้นเพราะ ฉันสนุกกับการหาทางแก้ปัญหาที่ไม่ซ้ำกันให้กับนักเรียนคนต่างๆ					
61	เมื่อฉันทุ่มเทในการทำหน้าที่ครู ฉันทำเช่นนั้นเพราะ ฉันสนุกกับการสร้างความสัมพันธ์กับผู้คน					
62	เมื่อฉันอุทิศเวลางานให้กับนักเรียนแต่ละคน ฉันทำเช่นนั้นเพราะ ฉันชอบการติดต่อกับนักเรียน					

Appendix B

The invitation for investigate the translate questionnaire letter

i. Asst. Prof. Dr. Noppakao Na Phattalung



PUSAT PENGAJIAN PENDIDIKAN DAN BAHASA MODEN
SCHOOL OF EDUCATION AND MODERN LANGUAGES
College of Art and Sciences
Universiti Utara Malaysia
06010 UUM SINTOK
KEDAH DARUL AMAN
MALAYSIA



Tel: 604-928 5381
Faks (Fax): 604-928 5382
Laman Web (Web): www.sem1.uum.edu.my

24th July 2017

To whom it may concern

Dear Professor/Dr./Sir/Madam,

INVITATION TO BE SPECIALIST FOR INVESTIGATE THE TRANSLATE
QUESTIONNAIRE TO PH.D. STUDENT THESIS UNIVERSITI UTARA MALAYSIA:
SINGHA TULYAKUL

The above matter is kindly referred.

My Ph. D. student Mr. Singha Tulyakul from Universiti Utara Malaysia will conduct the data collection of his thesis title "PHYSICAL EDUCATION CLASSROOM MANAGEMENT STRATEGIES AND MOTIVATION FOR TEACHING TOWARDS TEACHING EFFECTIVENESS AMONG TEACHERS IN SOUTHERN THAILAND". Before data collection he needs to certified translate questionnaire from the specialist for validity and accuracy in this questionnaire. Thus, we consider that you have a qualification and performance to investigate this questionnaire.

In other to complete a questionnaire, I would like to request Asst. Prof. Dr. Noppakao Na Phattalung to the specialist to investigate the translated questionnaire. If you require any further information, please do not hesitate to contact me at Email: mohdsofian@uum.edu.my and telephone +60125687508

Thank you for your time and consideration in this matter.


PROF. DR. MOHD SOFIAN BIN OMAR FAUZEE

School of Education and Modern Language

College of Arts and Sciences, UUM

Universiti Pengurusan Terkemuka
The Eminent Management University



ii. Dr. Sirirat Sinprajakpol



PUSAT PENGAJIAN PENDIDIKAN DAN BAHASA MODEN
SCHOOL OF EDUCATION AND MODERN LANGUAGES
College of Art and Sciences
Universiti Utara Malaysia
06010 UUM SINTOK
KEDAH DARUL AMAN
MALAYSIA



Tel: 604-928 5381
Faks (Fax): 604-928 5382
Laman Web (Web): www.semi.uum.edu.my

24th July 2017

To whom it may concern

Dear Professor/Dr./Sir/Madam,

INVITATION TO BE SPECIALIST FOR INVESTIGATE THE TRANSLATE
QUESTIONNAIRE TO PH.D. STUDENT THESIS UNIVERSITI UTARA MALAYSIA:
SINGHA TULYAKUL

The above matter is kindly referred.

My Ph. D. student Mr. Singha Tulyakul from Universiti Utara Malaysia will conduct the data collection of his thesis title "PHYSICAL EDUCATION CLASSROOM MANAGEMENT STRATEGIES AND MOTIVATION FOR TEACHING TOWARDS TEACHING EFFECTIVENESS AMONG TEACHERS IN SOUTHERN THAILAND" Before data collection he needs to certified translate questionnaire from the specialist for validity and accuracy in this questionnaire. Thus, we consider that you have a qualification and performance to investigate this questionnaire.

In other to complete a questionnaire, I would like to request Dr. Sirirat Sinprajakpol to the specialist to investigate the translated questionnaire. If you require any further information, please do not hesitate to contact me at Email: mohdsofian@uum.edu.my and telephone +60125687508

Thank you for your time and consideration in this matter.

PROF. DR. MOHD SOFIAN BIN OMAR FAUZEE

School of Education and Modern Language

College of Arts and Sciences, UUM

Universiti Pengurusan Terkemuka
The Eminent Management University



iii. Asst. Prof. Dr. Suntara Klanarong



PUSAT PENGAJIAN PENDIDIKAN DAN BAHASA MODEN
SCHOOL OF EDUCATION AND MODERN LANGUAGES
College of Art and Sciences
Universiti Utara Malaysia
06010 UUM SINTOK
KEDAH DARUL AMAN
MALAYSIA



Tel: 604-928 5381
Faks (Fax): 604-928 5382
Laman Web (Web): www.semi.uum.edu.my

24th July 2017

To whom it may concern

Dear Professor/Dr./Sir/Madam,

INVITATION TO BE SPECIALIST FOR INVESTIGATE THE TRANSLATE
QUESTIONNAIRE TO PH.D. STUDENT THESIS UNIVERSITI UTARA MALAYSIA:
SINGHA TULYAKUL

The above matter is kindly referred.

My Ph. D. student Mr. Singha Tulyakul from Universiti Utara Malaysia will conduct the data collection of his thesis title "PHYSICAL EDUCATION CLASSROOM MANAGEMENT STRATEGIES AND MOTIVATION FOR TEACHING TOWARDS TEACHING EFFECTIVENESS AMONG TEACHERS IN SOUTHERN THAILAND" Before data collection he needs to certified translate questionnaire from the specialist for validity and accuracy in this questionnaire. Thus, we consider that you have a qualification and performance to investigate this questionnaire.

In other to complete a questionnaire, I would like to request Asst. Prof. Dr. Suntara Klanarong to the specialist to investigate the translated questionnaire. If you require any further information, please do not hesitate to contact me at Email: mohdsofian@uum.edu.my and telephone +60125687508

Thank you for your time and consideration in this matter.

PROF. DR. MOHD SOFIAN BIN OMAR FAUZEE

School of Education and Modern Language

College of Arts and Sciences, UUM

Universiti Pengurusan Terkemuka
The Eminent Management University



Appendix C

Approval letter from Universiti Utara Malaysia to data collection



PUSAT PENGAJIAN PENDIDIKAN DAN BAHASA MODEN
SCHOOL OF EDUCATION AND MODERN LANGUAGES
College of Art and Sciences
Universiti Utara Malaysia
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MALAYSIA



Tel: 604-928 5381
Faks (Fax): 604-928 5382
Laman Web (Web): www.soml.uum.edu.my

15th October 2017

Dear Sir/Madam,

REQUEST PERMISSION TO CONDUCT THE DATA COLLECTION FOR PH. D
STUDENT THESIS UNIVERSITI UTARA MALAYSIA: SINGHA TULYAKUL

The above matter is kindly referred.

My Ph.D. student Mr. Singha Tulyakul from Universiti Utara Malaysia will conduct the data collection of his thesis title "PHYSICAL EDUCATION CLASSROOM MANAGEMENT STRATEGIES AND MOTIVATION FOR TEACHING TOWARDS TEACHING EFFECTIVENESS AMONG TEACHERS IN SOUTHERN THAILAND."

In other to his to do the collect data, we would like to request your permission to employ physical educators in your school to participate in this test. For the purpose of that, we would like to enclose a copy of the questionnaire, test and the consent form to be used in the collected data. If you require any further information, please do not hesitate to contact me at Email: mohdsofian@uum.edu.my and telephone +60125687508

Thank you for your time and consideration in this matter.

PROFESSOR DR. MOHD SOFIAN BIN OMAR FAUZEE




School of Education and Modern Language

College of Arts and Sciences, UUM

Universiti Pengurusan Terkemuka
The Eminent Management University



Approval letter from Thaksin University to data collection

ที่ ศธ ๖๔.๑๓/ ๑ ๐๙๖		คณะศึกษาศาสตร์ มหาวิทยาลัยทักษิณ อำเภอเมือง จังหวัดสงขลา ๙๐๐๐๐
๑๑ ตุลาคม ๒๕๖๐		
เรื่อง ขออนุญาตเก็บข้อมูลสำหรับการวิจัย เรียน ผู้อำนวยการสถานศึกษา		
เนื่องด้วย นายสิงหา ตุลยกุล อาจารย์สาขาพลศึกษาและสุขศึกษา คณะศึกษาศาสตร์ มหาวิทยาลัยทักษิณ ซึ่งกำลังศึกษาต่อในระดับปริญญาเอก ณ Universiti Utara Malaysia ประเทศมาเลเซีย และได้ดำเนินการวิจัย เรื่อง “Physical education classroom management strategies and motivation for teaching towards teaching effectiveness among teachers Southern Thailand”		
ในการนี้เพื่อให้การดำเนินการวิจัยเป็นไปด้วยความเรียบร้อยและมีประสิทธิภาพ จึงใคร่ขอ อนุญาตเก็บรวบรวมข้อมูลสำหรับการวิจัยกับครูที่สอนวิชาพลศึกษาในหน่วยงานของท่าน		
คณะศึกษาศาสตร์ มหาวิทยาลัยทักษิณ หวังเป็นอย่างยิ่งว่าจะได้รับความอนุเคราะห์จากท่าน ด้วยดี และขอขอบพระคุณเป็นอย่างสูงมา ณ โอกาสนี้		
	ขอแสดงความนับถือ Universiti Utara Malaysia	
 (อาจารย์ ดร.เกษม เปรมประยูร) รองคณบดีฝ่ายวิจัยและบริการวิชาการ รักษาการแทน คณบดีคณะศึกษาศาสตร์ ปฏิบัติหน้าที่แทน อธิการบดีมหาวิทยาลัยทักษิณ		
สาขาวิชาพลศึกษาและสุขศึกษา คณะศึกษาศาสตร์ โทรศัพท์ / โทรสาร : ๐๙๔-๓๒๒๕๒๑, ๐๙๔-๓๑๗๖๐๐ ต่อ ๓๖๐๑		

Permission to using questionnaire

Permission to using questionnaire

To: pkingiri@phyed.duth.gr

Details

Dear Sir,

I am a doctoral student in Universiit Utara Malaysia. I found your article "Development of a questionnaire for self-evaluation of teacher effectiveness in physical education (SETEQ-PE)" very interesting and would like to use the questionnaire in my dissertation research in Thailand. My research is going to investigate the teaching effectiveness in physical education teachers in southern Thailand. As you are the lead researchers in this article, My supervisor asked me to get permission to use the questionnaire so I will translate to do the research.

Best regard

Singha Tulyakul

See More

Πάυλος Κυργιρίδης

Re: Permission to using questionnaire

To: singha tulyakul

yesterday

Details

nk

Quoting singha tulyakul <singha2125@hotmail.com>:

Dear Sir,

I am a doctoral student in Universiit Utara Malaysia. I found your article "Development

Show Quoted Content

Best regard

Singha Tulyakul

Universiti Utara Malaysia

Dear Singha,

You can certainly use it. It is a task together with the observation protocol being prepared, 5 years old. I would be interested to know about the results and how it works on your own sample. Here, there has been a survey of Physical Education teachers with 100 hours of Teaching. we could compare any results.

Good luck...

Regards,

Dr. Pavlos Kyrgyridis,

Giannitsa, Pella, Greece

Appendix D

The number of school name, sample size and distribution of questionnaires.

No	Provinces	School simples	Sample size	Distributed questionnaires (Oversampling= 20%)	Returned question naires	Question naire not return	Incomplet e question naires	Retained questionnaires
1	Nahorn Sri Thammarat	16	$(92/699) \times 248 = 33$	40	38	2	3	35
	1. School 1			4	4			
	2. School 2			2	2			
	3. School 3			2	2			
	4. School 4			2	2			
	5. School 5			2	2			
	6. School 6			1	1			
	7. School 7			2	2			
	8. School 8			4	4			
	9. School 9			5	5			
	10. School 10			4	4			
	11. School 11			2	0			
	12. School 12			2	2			
	13. School 13			2	2			
	14. School 14			2	2			
	15. School 15			3	3			
	16. School 16			1	1			
2	Narathiwat	23	$(107/699) \times 248 = 38$	46	38	8	1	37
	1. School 1			3	3			
	2. School 2			3	3			
	3. School 3			2	2			
	4. School 4			1	1			
	5. School 5			4	4			

				1	1			
				2	2			
				1	1			
				2	0			
				2	0			
				3	3			
				1	0			
				2	2			
				2	0			
				2	2			
				2	2			
				2	2			
				2	2			
				2	2			
				1	0			
				3	3			
				2	2			
				1	1			
3	Phatthalung	5	$(16/699) \times 248 = 6$	7	5	2	0	5
	1. School 1			2	0			
	2. School 2			1	1			
	3. School 3			1	1			
	4. School 4			1	1			
	5. School 5			2	2			
4	Chumpon	14	$(43/699) \times 248 = 15$	18	16	2	0	16
	1. School 1			3	3			
	2. School 2			2	2			
	3. School 3			1	1			

			4. School 4	1	1				
			5. School 5	1	1				
			6. School 6	1	1				
			7. School 7	1	1				
			8. School 8	2	0				
			9. School 9	1	1				
			10. School 10	1	1				
			11. School 11	1	1				
			12. School 12	1	1				
			13. School 13	1	1				
			14. School 14	1	1				
5	17	(87/699) X 248 = 31	Songkhla	37	34	3	2		32
			1. School 1	2	2				
			2. School 2	2	2				
			3. School 3	1	1				
			4. School 4	1	1				
			5. School 5	6	6				
			6. School 6	1	1				
			7. School 7	3	3				
			8. School 8	1	1				
			9. School 9	2	2				
			10. School 10	1	1				
			11. School 11	3	3				
			12. School 12	6	6				
			13. School 13	2	2				
			14. School 14	3	0				
			15. School 15	1	1				
			16. School 16	1	1				
			17. School 17	1	1				

6	Suratthani	17	$(70/699) \times 248 = 25$	30	28	2	1	27
	1. School 1			2	2			
	2. School 2			2	2			
	3. School 3			2	2			
	4. School 4			3	3			
	5. School 5			1	1			
	6. School 6			1	1			
	7. School 7			1	1			
	8. School 8			2	2			
	9. School 9			2	0			
	10. School 10			3	3			
	11. School 11			1	1			
	12. School 12			1	1			
	13. School 13			1	1			
	14. School 14			2	2			
	15. School 15			2	2			
	16. School 16			2	2			
	17. School 17			2	2			
7	Pattani	8	$(42/699) \times 248 = 15$	18	15	3	0	15
	1. School 1			2	2			
	2. School 2			1	1			
	3. School 3			2	2			
	4. School 4			2	2			
	5. School 5			3	0			
	6. School 6			3	3			
	7. School 7			4	3			
	8. School 8			1	1			

8	Krabi	12	$(38/699) \times 248 = 13$	16	15	1	2	13
	1. School 1			2	2			
	2. School 2			1	1			
	3. School 3			1	1			
	4. School 4			1	1			
	5. School 5			1	1			
	6. School 6			2	2			
	7. School 7			1	1			
	8. School 8			2	2			
	9. School 9			1	1			
	10. School 10			2	2			
	11. School 11			1	1			
	12. School 12			1	0			
9	Phuket	7	$(44/699) \times 248 = 16$	19	19	0	0	19
	1. School 1			5	5			
	2. School 2			5	5			
	3. School 3			2	2			
	4. School 4			2	2			
	5. School 5			2	2			
	6. School 6			1	1			
	7. School 7			2	2			
10	Trang	6	$(38/699) \times 248 = 13$	16	13	3	0	13
	1. School 1			2	2			
	2. School 2			4	1			
	3. School 3			4	4			
	4. School 4			2	2			
	5. School 5			2	2			
	6. School 6			2	2			

11	Phang-nga	3	(14/699) X 248 = 5	6	6	0	0	6
	1. School 1			3	3			
	2. School 2			2	2			
	3. School 3			1	1			
12	Yala	14	(77/699) X 248 = 27	32	30	2	1	29
	1. School 1			2	2			
	2. School 2			1	1			
	3. School 3			3	3			
	4. School 4			2	2			
	5. School 5			2	2			
	6. School 6			2	2			
	7. School 7			2	2			
	8. School 8			1	1			
	9. School 9			1	1			
	10. School 10			2	2			
	11. School 11			4	4			
	12. School 12			4	4			
	13. School 13			4	4			
	14. School 14			2	0			
13	Ranong	4	(21/699) X 248 = 7	8	8	0	1	7
	1. School 1			4	4			
	2. School 2			2	2			
	3. School 3			1	1			
	4. School 4			1	1			
14	Satun	3	(10/699) X 248 = 4	5	4	1	0	4
	1. School 1			2	2			
	2. School 2			2	2			
	3. School 3			1	0			
	Total	149	248	298	269	29	11	258

Appendix E

Bivariate Outlier Test (z-score)

Respondents No.	Dimensions of Variables												
	CMSp	CMSs	CMSc	Tee	Teas	Teapp	Teu	Tet	Tel	MTex	MTintro	MTiden	MTin
1	-0.546	1.026	-0.572	0.167	-0.310	1.018	0.226	-0.223	-0.415	-1.892	-1.062	0.736	1.268
2	-1.326	0.093	-1.323	-0.918	-0.310	-1.545	-0.864	-0.685	0.377	0.056	-0.353	-1.137	-1.512
3	-0.806	1.026	-1.323	-0.918	-0.596	-1.033	-0.864	-0.223	1.169	-1.648	0.710	0.736	1.268
4	-0.806	-0.219	-0.948	-0.918	-0.882	-0.520	-1.410	-0.223	-0.415	-0.431	-1.417	-2.542	-2.439
5	-2.885	-0.841	-0.572	-1.641	-2.312	-0.008	-2.228	-2.532	-1.207	-0.674	-1.062	-2.542	1.268
6	1.274	1.338	1.305	-0.556	-0.023	1.530	-1.137	0.700	1.169	0.543	0.001	-0.669	-0.586
7	-0.026	1.026	1.305	-0.195	-0.023	-1.033	0.226	-0.223	-0.415	0.786	0.356	-0.669	-1.049
8	-0.806	-0.841	0.554	-0.195	0.835	1.018	0.499	0.239	-1.207	0.300	-0.708	0.268	-0.122
9	-0.546	-0.841	0.554	-0.195	0.549	-0.008	-0.319	-0.223	-1.207	0.543	0.356	-0.200	-1.512
10	1.274	-0.841	-1.699	0.167	1.121	1.018	1.316	0.700	1.169	-2.378	1.065	1.205	0.804
11	0.234	0.093	-0.197	0.890	-0.596	0.505	-0.864	0.239	1.169	1.273	0.710	-0.200	1.268
12	0.494	1.338	0.554	0.528	0.549	1.530	1.316	1.624	-0.415	0.056	0.356	0.736	-0.122
13	-0.286	-0.530	-0.948	-0.195	-1.168	-0.008	-0.047	-1.147	-0.811	-1.648	0.710	1.205	1.268
14	-1.066	-0.530	-2.450	0.167	-1.168	0.505	-1.410	-0.223	0.773	-0.187	-2.480	0.268	-0.122
15	1.534	1.026	0.554	0.528	-0.310	-0.520	-0.864	-0.685	-0.019	0.300	0.356	-0.669	-0.122
16	1.014	1.649	-0.948	1.613	0.549	1.018	-0.047	-0.223	1.169	0.056	-0.708	-0.669	-0.586
17	1.014	1.026	-0.197	0.890	-0.023	-0.008	0.499	0.239	0.773	-0.918	0.710	0.736	0.341
18	0.234	0.404	-0.197	-0.918	-3.457	0.505	-1.955	-0.685	0.377	-0.918	0.001	-0.669	-1.049
19	0.754	1.026	-0.572	1.613	0.263	-0.008	-1.137	1.624	0.377	1.517	1.419	0.268	1.268

20	1.014	-0.219	0.930	0.167	0.835	-0.008	0.771	1.624	0.773	0.300	0.001	-0.669	0.804
21	0.234	0.093	-1.699	1.251	0.263	1.018	0.226	0.700	0.773	-1.405	1.065	0.268	0.341
22	1.014	1.649	-0.572	1.251	1.693	1.018	1.316	1.162	-0.019	0.786	0.710	0.268	-0.122
23	0.234	0.715	0.554	1.613	-0.023	1.018	0.771	1.624	-0.019	-0.431	-0.353	0.736	0.804
24	0.754	0.715	-0.197	-0.556	-1.168	-2.058	-0.592	-2.532	-0.019	-0.187	0.001	-0.669	-0.586
25	1.274	1.338	-0.197	1.251	0.263	1.530	1.862	1.624	1.169	-0.918	-0.353	-0.669	1.268
26	-0.026	0.404	-0.197	0.528	1.121	1.530	1.044	0.239	-0.019	1.030	0.356	-0.200	0.341
27	0.234	0.715	-0.948	-0.556	-1.168	-0.520	-1.137	0.700	1.169	-0.674	0.356	0.736	0.341
28	-0.806	0.715	2.431	0.890	1.407	0.505	1.316	0.700	0.773	1.517	0.710	0.736	0.804
29	0.494	0.093	2.056	0.890	1.121	1.018	0.226	0.700	0.377	1.030	0.710	0.268	0.804
30	0.754	1.026	0.930	0.528	1.121	-0.008	-0.047	-0.223	-0.811	1.517	0.710	1.205	0.804
31	0.234	0.093	-0.572	0.167	-0.882	-1.545	-0.592	-0.685	0.377	-0.674	0.001	-0.669	-0.586
32	0.494	0.404	-0.948	1.251	-0.023	-0.008	-0.592	1.162	0.377	1.273	0.356	-0.669	-1.049
33	0.494	0.715	1.305	-0.918	-0.023	-0.008	0.499	-0.223	0.773	0.543	1.419	0.736	0.341
34	-0.806	0.404	-0.197	-0.195	-0.882	-1.033	-0.047	-0.685	-0.811	-0.674	0.001	-0.669	-1.512
35	1.534	1.649	0.179	0.890	0.263	1.018	1.316	1.624	0.773	1.273	1.419	1.205	1.268
36	-0.546	0.715	0.179	0.167	-0.310	0.505	-0.319	1.624	1.169	-1.892	-0.708	1.205	0.341
37	-0.806	-0.219	-0.197	0.528	1.407	-0.008	-0.319	-0.685	0.773	-0.431	0.001	1.205	0.804
38	0.754	1.026	-0.572	1.251	0.549	-0.520	0.226	-0.223	-0.415	0.300	-0.353	0.268	0.804
39	-0.546	-1.152	-0.572	-1.279	-0.310	-1.033	-0.047	-0.685	-0.811	0.300	-0.353	-1.137	-1.049
40	-0.026	1.026	0.554	1.251	1.121	0.505	0.771	0.700	1.169	1.030	0.001	-0.200	1.268
41	1.014	0.404	-0.197	0.528	1.693	0.505	1.044	1.624	1.169	-0.431	-1.062	1.205	1.268
42	1.014	0.715	-0.572	0.528	1.407	1.018	0.499	1.624	0.773	-0.187	1.419	1.205	0.804
43	1.014	0.404	-0.948	-0.195	0.549	0.505	1.044	-0.223	0.773	-0.918	0.710	1.205	1.268
44	-0.286	0.404	0.554	0.890	1.121	0.505	1.044	0.700	0.773	1.030	0.710	0.268	-0.122

45	0.754	1.026	-0.948	0.167	-0.023	0.505	1.316	0.239	0.773	-0.431	0.356	0.736	0.341
46	0.494	0.404	-0.948	0.528	0.835	-0.520	1.044	-0.685	1.169	-1.648	-3.543	-1.605	-1.049
47	0.494	0.093	-0.948	-0.195	-0.023	-0.008	0.499	0.700	-0.019	-2.135	-2.834	-0.200	-1.049
48	-0.026	0.093	-3.201	0.167	-0.882	-0.520	0.771	-0.223	0.773	1.517	1.419	1.205	-0.122
49	1.534	-0.219	1.681	-0.195	-0.310	-0.520	-0.047	-0.685	-0.415	0.543	-0.353	-0.669	-0.586
50	-0.026	1.338	0.554	0.528	-0.023	0.505	1.589	0.239	0.773	1.517	0.710	0.268	0.804
51	-0.546	1.026	-0.948	-0.918	-0.310	-3.083	-0.592	-1.608	-0.811	0.056	-1.062	-0.669	-1.049
52	-0.546	-1.152	-0.572	-1.279	0.549	0.505	1.044	-0.223	0.773	0.786	0.356	0.268	-0.122
53	1.014	1.338	-0.197	-1.279	0.549	-0.520	-0.047	-0.223	1.169	-2.378	-1.417	-0.200	1.268
54	1.014	0.404	-0.948	-0.195	0.549	0.505	1.044	-0.223	0.773	-0.918	0.710	1.205	1.268
55	-1.326	1.338	0.930	0.890	0.835	0.505	1.044	-0.685	1.169	1.030	-0.708	-2.074	-1.049
56	1.534	1.649	-0.197	1.613	1.979	1.530	-1.682	1.624	1.169	1.517	1.419	1.205	1.268
57	-0.806	0.093	-1.323	-0.195	0.263	-0.520	0.771	-0.223	-0.415	0.543	0.001	-0.669	-0.586
58	-0.286	0.093	-0.948	-0.195	0.549	-0.008	0.499	0.239	-0.019	-0.918	1.419	1.205	1.268
59	-0.546	-0.530	-0.948	0.528	1.121	0.505	-0.864	0.700	0.773	-0.918	0.001	-0.669	-0.122
60	1.014	0.093	-0.197	-0.556	0.263	0.505	-0.319	-0.223	1.169	-2.378	-0.353	1.205	1.268
61	-0.806	-1.152	-0.572	-0.556	-0.310	-1.033	0.771	-0.223	-0.811	0.786	-0.353	-0.669	0.341
62	0.494	1.026	1.305	0.167	0.835	0.505	0.226	-0.223	-1.603	0.543	-0.353	-0.669	-0.586
63	0.494	0.093	-0.948	1.251	0.263	-0.520	0.771	1.624	1.169	-1.648	1.419	0.268	1.268
64	-1.326	-0.219	0.179	-1.279	-0.023	0.505	1.044	0.239	1.169	-0.918	-3.189	0.268	-1.512
65	-0.806	1.649	0.179	-0.195	-0.882	-1.033	-0.047	-2.070	-2.000	0.056	1.419	-0.669	-0.586
66	-0.286	0.093	0.930	-1.279	0.263	-0.520	1.044	-0.685	-1.207	0.543	-0.708	-1.605	-1.512
67	-1.326	-0.530	-0.197	-0.918	-0.023	-2.058	-1.410	-2.070	-1.603	0.056	-0.353	-1.605	-1.049
68	0.754	0.404	1.305	0.167	0.263	-0.520	0.226	-0.685	-1.207	0.056	-0.353	-2.542	-0.586
69	-1.326	-2.086	-1.323	-0.556	-0.882	-1.033	-0.319	-0.685	-0.415	-0.674	0.001	-0.669	-1.512

70	1.534	1.649	-1.699	0.528	0.549	1.530	-2.500	0.700	1.169	1.517	1.419	1.205	1.268
71	1.014	1.026	-0.197	0.890	1.407	1.018	0.771	1.624	1.169	0.543	0.001	0.268	-1.049
72	-1.326	-1.464	-0.948	-1.641	-0.882	-0.008	-2.228	-0.685	-0.019	-0.187	0.356	0.268	-0.586
73	-0.286	-0.219	-0.197	-0.195	0.263	-0.008	-1.137	0.700	-0.415	0.300	0.710	-0.200	0.804
74	-0.286	1.026	0.930	-0.918	-0.596	0.505	-0.864	-0.223	0.773	-1.648	0.001	0.736	-2.439
75	-0.806	-0.841	-0.197	0.167	-0.310	0.505	-1.137	0.239	0.773	0.056	0.356	-0.200	-2.439
76	-0.026	0.715	0.554	-0.195	0.263	-0.520	0.771	0.700	-0.415	1.030	1.065	1.205	1.268
77	1.014	-0.530	-1.323	0.890	-0.596	0.505	-0.047	-1.147	-0.415	-2.378	0.356	0.268	-0.122
78	1.534	1.649	-1.323	1.613	0.549	1.530	-0.864	1.624	1.169	-0.431	1.065	1.205	1.268
79	-1.326	-0.219	0.930	0.167	0.263	-0.008	0.499	-0.685	0.773	0.300	-0.708	-1.605	-0.586
80	-0.286	-0.530	2.056	0.167	1.121	-1.033	1.044	1.162	-0.415	1.030	0.356	-0.200	-0.586
81	-0.286	-0.530	2.056	0.167	1.121	-1.033	1.044	1.162	-0.415	1.030	0.356	-0.200	-0.586
82	-1.586	-0.530	-0.572	-0.195	0.263	-0.520	0.499	-0.223	-0.415	1.273	-0.353	-0.200	0.804
83	0.494	1.026	0.554	0.890	-0.596	0.505	-2.228	0.700	-0.019	1.517	-2.125	1.205	1.268
84	-0.806	-0.219	0.554	-0.195	-0.596	-0.008	-0.047	-0.223	-0.811	0.543	1.065	0.736	-0.586
85	0.494	0.093	1.305	0.167	0.263	-0.008	0.771	0.239	0.377	-0.918	0.710	1.205	-0.122
86	0.494	0.715	0.179	0.167	1.121	1.018	-0.047	0.700	0.377	0.056	-0.353	1.205	0.341
87	-0.026	0.093	-0.197	-0.195	0.835	1.018	0.226	0.239	0.377	-0.187	-0.353	1.205	-0.122
88	-0.026	-2.086	-1.323	-0.556	-0.882	-0.008	-0.047	-0.223	1.169	0.300	1.065	0.736	-0.586
89	0.234	-0.841	-0.572	0.167	-0.882	0.505	-1.410	0.239	-0.811	-0.431	0.710	0.268	-0.122
90	0.754	0.093	-0.572	0.528	0.263	-1.033	-0.047	-0.685	0.377	-0.431	0.356	0.268	-0.586
91	-0.286	-1.775	-0.948	-0.918	0.263	-1.545	-0.592	-0.685	-2.396	-0.187	-1.062	-1.137	-1.049
92	-1.846	-1.152	-0.197	-0.195	-1.454	-4.621	-2.228	-2.993	-2.000	-1.405	-0.708	-1.605	-3.366
93	1.014	0.093	0.554	0.528	0.549	1.018	0.771	-0.223	0.377	0.300	0.001	1.205	0.341
94	-1.066	0.404	0.179	-0.556	-0.023	-1.033	0.499	-0.685	-0.811	0.300	-0.353	-1.137	-0.586

95	0.234	-0.219	-0.572	-0.195	-2.884	-1.545	-1.137	0.239	-2.792	1.273	1.065	0.268	0.341
96	-0.806	0.093	0.930	-0.556	-0.023	-1.033	-0.592	-0.223	-0.811	0.786	0.710	0.736	0.341
97	-1.846	0.404	1.305	0.528	1.121	1.018	1.589	1.624	0.377	1.030	1.065	0.736	0.804
98	0.754	-1.152	-1.323	-1.641	-1.168	-0.008	-0.864	0.239	-0.019	0.300	0.356	0.736	-0.586
99	-0.806	0.715	0.930	0.167	0.835	0.505	1.044	0.239	0.773	0.543	0.710	0.268	1.268
100	-2.366	-1.152	-0.197	-1.279	-0.596	-0.520	-0.319	-1.147	-1.603	0.300	-1.062	-2.542	-1.512
101	-0.026	-0.841	-0.572	-1.641	-0.596	-0.520	-0.319	-0.685	-1.603	-0.918	-2.125	-0.200	-1.512
102	0.234	0.093	-0.572	-0.918	-1.454	-1.033	-1.410	-0.685	-2.396	-0.187	-2.480	-1.137	-1.049
103	-1.066	-0.530	-0.197	-0.918	0.549	-0.008	-0.592	-0.685	-0.415	-1.161	-3.189	-1.605	0.804
104	-0.286	1.026	1.305	0.890	-1.168	-0.008	0.226	0.239	-1.207	-1.405	0.001	-0.669	-1.512
105	-0.546	-1.152	-1.699	-1.279	-0.596	-1.545	-2.228	-3.455	-0.811	0.300	-1.062	-0.669	0.341
106	-0.806	0.404	-0.948	-1.641	-1.740	-0.520	-1.682	0.239	-1.207	-0.431	-2.834	-0.669	-0.586
107	-0.286	-0.219	0.930	0.167	0.549	-0.520	0.499	-0.223	-0.811	0.786	0.001	0.268	0.341
108	1.274	0.715	0.930	0.167	-0.882	1.018	-0.592	0.239	1.169	0.300	1.065	0.736	-0.122
109	-0.806	-1.464	-0.948	-0.918	-0.882	-0.008	-0.592	-0.685	-0.415	-1.161	-3.189	-0.200	0.804
110	1.014	1.649	-0.197	1.613	-2.312	-0.520	0.226	-0.223	-0.415	0.300	1.065	-0.669	-0.122
111	-2.106	-3.020	-1.699	-1.641	-1.740	-0.520	-1.137	-2.070	-1.603	0.786	0.001	1.205	1.268
112	-2.106	-1.775	-1.699	-1.641	-1.740	-0.520	-1.410	-2.070	-1.603	0.786	0.001	1.205	1.268
113	-2.366	-3.020	-1.323	-1.641	-1.740	-0.520	-1.410	-2.070	-1.603	0.786	0.001	1.205	1.268
114	0.234	-0.841	-0.948	-0.195	-0.310	-0.008	-0.319	-0.223	-1.207	-0.431	-0.708	-0.669	-0.586
115	-0.806	-0.219	0.930	-0.195	-0.882	-0.520	-0.319	-0.223	-0.415	-1.405	-3.543	0.736	-0.586
116	-1.586	-1.152	-0.948	-0.556	-1.168	-0.520	-2.500	-1.147	-2.000	0.056	-1.417	-2.542	-0.586
117	-1.326	-0.530	0.554	-0.918	-0.023	-1.033	0.226	-1.147	-1.207	-0.187	-0.353	-1.605	-0.586
118	-1.066	-0.841	0.930	-1.641	-1.740	-1.033	0.226	-1.147	-0.019	-0.187	-0.353	-0.669	-0.586
119	1.274	0.715	-0.572	0.528	0.549	1.530	0.771	-0.223	-0.019	-0.431	0.001	-0.200	1.268

120	0.494	0.404	-0.948	0.167	0.263	1.530	-1.137	0.239	-0.415	-2.378	0.356	1.205	1.268
121	-0.806	0.715	-0.197	-3.810	-2.312	1.018	0.771	-0.223	1.169	0.543	-0.708	-0.669	0.341
122	0.754	-0.530	0.554	0.528	-0.023	-0.520	0.771	-0.223	-0.415	0.056	0.001	-0.669	-0.586
123	0.754	-0.219	0.179	0.890	-0.310	0.505	0.499	1.162	1.169	-2.378	0.001	-0.669	-0.586
124	0.234	0.404	-0.197	-0.195	1.407	-0.520	-0.592	0.700	-0.019	0.543	0.356	0.268	-0.586
125	-2.106	-2.398	-1.699	-2.725	-2.598	-1.545	-1.682	-2.070	-1.603	0.300	-0.353	-1.605	-1.049
126	0.754	0.715	-0.948	1.251	0.263	-0.008	-0.047	-0.223	0.773	0.543	0.710	0.736	0.341
127	-0.026	-0.219	0.930	-0.195	-0.023	-0.008	1.589	1.162	-0.415	0.300	0.356	1.205	0.804
128	-0.286	-1.464	0.179	-0.195	0.549	-1.033	-0.047	-0.685	-0.415	0.543	0.001	-0.669	-0.122
129	-0.546	-0.530	-0.197	-1.279	-0.310	-1.033	-0.592	-0.223	-0.415	-0.187	-0.353	1.205	0.341
130	0.234	-0.219	0.179	-0.556	-0.596	-0.520	-0.592	-0.685	-0.019	-2.135	-0.353	1.205	-0.122
131	1.014	-0.219	-1.323	-0.556	0.549	-0.008	-0.047	0.239	0.377	-2.378	1.065	0.736	0.341
132	0.234	0.404	2.056	0.890	1.121	0.505	1.316	0.700	1.169	1.273	1.065	0.736	0.341
133	0.754	0.093	1.305	0.528	1.121	-0.008	1.044	0.239	-0.019	0.786	1.419	-0.200	-0.122
134	1.274	0.715	0.179	1.251	0.549	0.505	0.226	1.162	1.169	1.517	1.419	1.205	1.268
135	-0.026	-0.219	0.554	-0.918	0.263	0.505	0.226	-0.685	0.377	1.030	0.356	-0.669	0.341
136	-0.026	0.093	-2.450	-0.556	-1.740	-3.596	-2.500	-0.685	-0.811	-1.405	-0.708	-0.669	-1.049
137	1.014	1.649	-1.699	-0.195	-2.312	0.505	0.226	-0.223	1.169	-2.135	0.001	1.205	0.804
138	1.014	-0.219	-0.948	-0.195	-0.310	-0.520	0.226	-0.685	0.773	1.030	0.001	-0.669	-0.586
139	1.014	-0.530	-1.323	0.890	-1.168	-0.520	-0.864	-0.685	0.773	-2.378	0.356	-0.669	0.804
140	-0.026	-1.464	-0.572	-0.556	-2.026	-1.033	0.499	-1.147	-0.415	0.543	-0.708	-1.137	-0.586
141	1.534	1.338	0.554	1.251	0.835	1.530	-0.047	1.624	0.377	-2.378	1.419	1.205	1.268
142	0.494	-0.530	-1.323	0.167	-1.168	-2.571	-0.592	-1.147	-1.603	-0.431	-0.353	-2.074	-1.512
143	-0.286	-0.219	0.179	-0.195	-0.596	-1.545	0.771	0.239	0.773	-0.674	1.419	1.205	1.268
144	-0.806	-0.219	0.179	-0.918	-0.882	-1.545	-0.047	-0.223	-0.019	-0.918	1.065	1.205	0.804

145	-0.026	1.649	0.930	1.251	0.263	1.530	1.044	1.162	0.377	1.030	0.710	1.205	-0.586
146	0.234	0.404	0.930	1.251	0.263	-0.520	-0.047	-0.223	1.169	0.543	1.065	0.268	0.804
147	-1.066	0.404	0.554	0.167	0.835	-0.008	-0.047	-0.685	-1.603	0.543	-0.353	-0.200	-0.586
148	-1.066	0.093	1.681	0.528	1.121	-0.520	0.499	-0.223	-0.415	0.300	0.001	-0.669	-2.439
149	0.234	-0.219	-0.197	-0.556	-0.023	-0.008	-0.047	0.239	-0.415	0.300	1.065	0.268	-0.586
150	-0.026	0.093	-0.197	1.613	-0.310	-0.008	-2.228	0.239	0.773	-1.648	-1.417	0.268	-1.049
151	1.534	1.026	2.056	1.613	-1.454	1.530	0.771	1.624	1.169	0.056	1.419	1.205	1.268
152	0.494	0.715	0.930	0.890	-0.023	-0.008	0.771	0.239	1.169	0.786	0.356	1.205	-1.049
153	-0.026	-0.530	-0.197	-0.195	-1.454	0.505	1.044	0.239	0.377	-1.892	-0.353	1.205	-0.122
154	-1.326	-0.530	0.179	-0.195	-2.026	1.018	0.499	-0.223	-0.415	-0.431	0.356	0.268	0.341
155	0.754	0.404	0.179	0.890	0.835	1.018	0.499	0.239	0.773	0.056	0.356	-0.200	-0.122
156	0.754	0.093	0.179	-2.364	-0.023	0.505	0.499	-0.685	-0.019	0.786	-0.353	-1.605	-1.049
157	-0.026	0.404	0.179	0.890	0.263	-0.520	-0.047	0.700	0.377	-0.674	0.356	1.205	1.268
158	1.274	1.649	1.305	0.890	0.835	1.018	-0.319	-0.223	1.169	1.273	1.065	0.736	0.804
159	1.534	1.338	1.305	1.613	1.121	1.530	1.044	1.624	1.169	0.786	0.710	1.205	0.804
160	-0.286	-0.219	0.554	-0.556	0.835	-1.033	0.771	0.239	-0.019	1.273	0.356	-0.669	-1.049
161	0.494	0.404	-0.948	0.167	0.835	1.018	0.771	0.700	1.169	-0.431	0.001	0.736	-0.122
162	-0.806	1.026	-0.197	0.528	0.549	0.505	1.044	0.700	-0.019	0.300	0.001	-0.669	-0.586
163	-1.586	-1.464	-0.948	-2.364	-1.168	-2.058	-2.500	-2.070	-2.000	-1.405	-1.771	-2.074	-2.439
164	1.014	0.404	-0.572	0.167	-0.023	0.505	-0.319	0.239	0.773	0.300	-0.708	0.736	-0.122
165	1.534	1.649	2.807	1.613	1.979	1.530	1.862	1.624	1.169	1.517	1.419	1.205	1.268
166	-0.806	-0.530	1.681	-0.195	0.549	-0.520	0.771	-0.223	-0.415	0.543	0.001	-0.669	-0.586
167	0.234	1.026	0.930	1.251	0.835	1.530	1.044	1.624	0.377	1.517	0.710	-0.669	-0.586
168	0.494	0.715	2.056	-0.195	1.121	1.018	0.499	0.700	0.377	1.030	0.710	-0.200	0.804
169	1.534	0.093	0.554	1.613	0.549	1.018	-0.047	1.624	-0.415	0.543	1.419	1.205	1.268

170	-0.546	-0.530	-0.948	-1.641	-0.596	-1.033	-0.319	-2.070	-0.415	-0.918	-0.353	-0.669	-0.586
171	-0.286	-0.841	-0.197	0.528	0.549	-0.520	1.316	-0.223	-0.019	0.300	0.001	-0.669	-0.122
172	-0.026	0.093	0.179	0.528	-1.740	1.018	-1.682	0.239	-0.415	0.056	1.065	1.205	0.804
173	-2.106	-1.464	0.554	-1.641	-0.023	-2.058	-0.864	-1.608	-1.603	-0.187	-1.417	-3.010	-2.902
174	-1.066	0.404	1.305	0.167	-0.596	-1.033	-0.319	-0.685	-0.811	0.543	0.001	-0.669	-0.586
175	0.754	0.404	1.305	0.167	-0.596	-0.008	-1.682	0.239	-0.811	-0.918	1.419	-0.200	1.268
176	1.274	-0.219	-0.197	1.613	-0.310	1.018	-0.319	0.700	0.377	-0.431	1.419	1.205	-1.049
177	1.274	0.093	0.554	0.890	1.121	1.530	0.226	0.700	1.169	-0.674	0.001	1.205	1.268
178	-1.586	-0.841	0.179	0.167	-0.310	-0.520	-1.410	-1.147	-1.207	0.543	0.001	-0.669	-0.586
179	-4.705	-4.576	-1.323	-1.641	0.549	0.505	0.771	-2.993	-3.980	-0.431	0.001	-0.669	-1.512
180	-0.546	-0.530	0.179	1.251	-0.023	-0.520	0.771	-0.223	-0.019	1.030	0.001	0.736	-0.586
181	-1.066	-1.775	-0.197	0.167	-0.023	-0.520	-1.682	-0.223	-0.019	0.300	-0.708	0.268	1.268
182	1.014	0.715	1.305	1.251	1.693	1.530	1.044	1.624	1.169	1.273	1.419	1.205	1.268
183	-0.286	-0.219	1.681	0.167	0.835	-0.008	0.771	-0.223	0.773	0.543	-0.353	-0.669	-1.049
184	-1.066	-0.530	-0.197	-1.279	-0.310	-0.520	-2.500	-0.685	-2.396	0.056	-0.708	-1.137	-1.512
185	0.234	1.338	-0.572	-0.556	-1.454	-0.008	-1.955	-0.685	-0.019	-0.674	0.356	0.736	-0.122
186	0.494	0.715	0.930	0.528	-0.023	1.018	1.316	0.700	1.169	1.517	1.419	0.736	0.804
187	0.494	-0.530	-0.572	0.528	0.835	-0.520	1.044	1.162	0.773	-0.187	-1.062	0.736	-1.049
188	0.234	0.093	0.554	-4.533	-1.454	1.530	1.862	-0.223	0.377	-1.405	1.419	1.205	1.268
189	-0.286	-0.530	-0.197	0.167	-0.023	-0.520	1.044	0.239	-0.019	-0.918	-0.708	-0.200	0.341
190	0.754	-1.464	-0.572	-1.641	-0.310	-1.033	-0.319	-1.147	-0.415	-0.431	-0.353	-0.200	-0.122
191	-0.286	-1.152	-0.197	-1.641	-2.598	0.505	-0.864	-2.070	-3.188	0.543	-0.708	0.736	-0.586
192	1.274	0.715	-0.572	-0.195	1.979	-0.008	1.862	1.162	1.169	0.056	0.710	-0.669	0.804
193	0.494	0.404	-0.197	0.890	0.835	-0.008	0.771	1.162	1.169	0.300	-0.353	-0.669	0.804
194	-0.026	0.404	0.930	0.528	-2.026	-0.520	-0.047	-1.147	-0.811	-0.187	-1.771	-0.669	-1.049

195	-0.546	0.093	0.930	-0.195	0.263	-1.033	-0.319	0.239	-0.019	-0.187	-0.708	0.736	0.341
196	1.014	-0.219	1.305	0.167	0.835	1.018	0.771	1.162	1.169	0.786	0.356	1.205	1.268
197	-0.546	-0.530	0.554	-0.195	-0.596	-0.008	-1.137	0.700	0.377	-0.674	-0.708	-0.200	0.804
198	1.274	0.093	0.179	1.251	1.407	1.018	0.771	1.624	1.169	-0.431	-0.353	0.736	-0.586
199	-0.546	-2.086	-0.948	-0.195	0.263	-0.520	-1.955	-0.685	-0.415	-0.431	-0.708	-0.669	-1.049
200	0.494	0.715	1.305	-0.918	-0.310	-2.058	-0.319	-1.147	-1.207	0.300	-1.062	-1.605	-1.049
201	-0.286	-0.841	-0.197	-0.195	0.263	-0.008	-1.137	-0.223	-0.019	1.517	-1.417	1.205	-0.586
202	-0.546	-0.530	1.681	0.167	0.549	0.505	0.499	-0.223	0.773	-0.431	-0.353	0.736	0.341
203	0.494	0.404	-0.197	-0.556	-0.882	-0.008	-0.319	0.239	0.377	0.056	1.419	1.205	1.268
204	0.754	0.404	0.179	0.890	-0.596	1.530	-0.047	1.624	1.169	-1.405	-1.417	1.205	-0.122
205	0.494	0.404	0.930	0.167	0.263	-0.008	0.499	-0.223	-0.415	0.300	1.065	1.205	1.268
206	-0.546	0.093	0.179	0.890	0.549	-0	0.226	0.700	-0.811	-0.431	0.001	1.205	-0.122
207	-0.806	-0.219	1.681	0.167	0.549	-0	-1.137	-0.685	0.773	0.543	0.356	-2.074	-0.122
208	-0.286	0.404	1.681	-0.195	-0.023	0.505	-0.047	0.700	-0.019	0.056	-0.353	-0.669	-0.586
209	-0.026	-0.841	-1.699	0.890	-1.740	1.018	-1.682	0.239	1.169	-1.648	0.710	-0.669	-0.122
210	-1.066	-3.020	-2.074	-0.195	-0.310	-0.008	0.771	0.700	0.377	-0.674	0.001	1.205	0.804
211	1.014	1.338	-1.323	0.528	-0.023	-1.545	-0.047	0.700	1.169	-0.187	0.001	0.736	-1.049
212	-0.026	1.026	0.179	0.167	-0.310	-0.008	0.771	0.700	-0.415	-1.405	1.065	0.268	0.341
213	-0.546	-0.530	-0.197	-2.002	0.549	1.018	0.499	0.700	1.169	1.517	-0.708	-1.137	0.341
214	0.754	1.338	0.554	1.613	0.263	-0.008	-0.319	-0.685	0.773	0.786	0.356	0.736	1.268
215	1.534	1.338	-0.948	-1.279	1.121	1.018	-0.319	1.162	1.169	1.517	-0.353	0.268	0.804
216	-0.026	0.093	-0.572	0.167	-1.168	-0.008	-0.592	-0.685	0.773	-1.892	-1.417	0.268	-0.586
217	0.754	1.026	0.554	0.167	1.693	1.018	0.771	1.162	1.169	1.030	-0.353	-0.200	0.804
218	0.234	-0.530	-0.197	0.528	0.549	-0.008	-0.319	-0.223	-0.415	-0.187	0.001	-0.669	1.268
219	0.234	0.093	0.179	0.528	-0.023	0.505	1.316	0.700	-0.019	0.056	-2.834	0.268	0.341

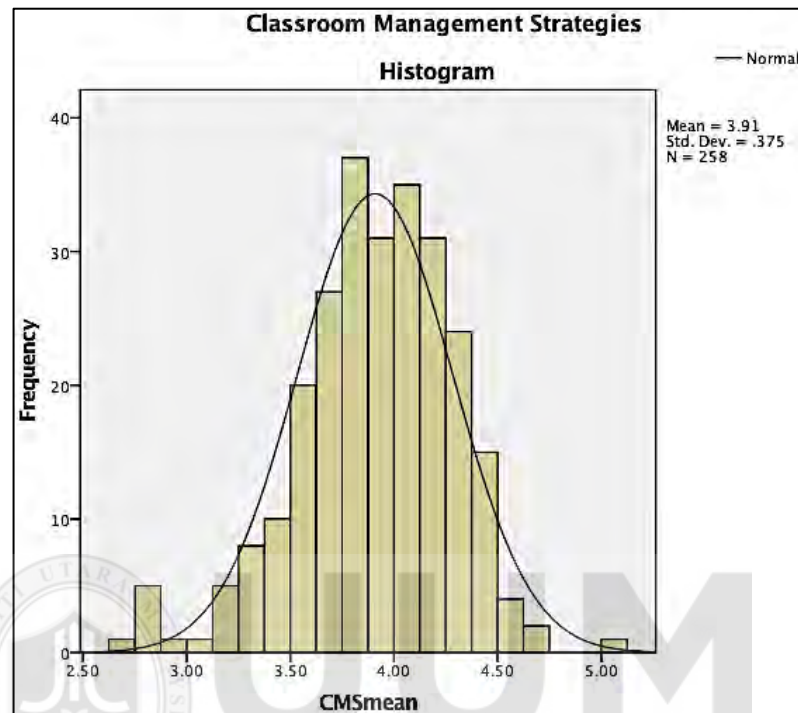
220	0.754	0.404	1.305	1.251	1.979	1.530	1.044	1.162	1.169	1.030	1.065	1.205	1.268
221	0.754	-0.219	-0.572	-0.195	0.549	-0.008	-0.047	0.239	-0.019	0.543	0.356	-0.200	0.341
222	-0.806	-0.841	-0.948	0.167	0.263	-0.520	0.499	-0.223	0.377	0.543	0.001	-0.669	0.804
223	0.754	0.715	-0.948	0.167	0.549	-0.520	-1.682	-0.223	0.377	-0.674	-1.771	-0.669	-0.586
224	-0.806	-0.841	-0.197	-0.556	-0.310	-0.520	-1.955	-1.147	0.377	0.543	-0.353	-0.669	-0.586
225	-1.326	-0.841	0.554	-0.918	0.263	-1.033	1.316	-0.223	-0.811	0.056	-0.353	0.268	-0.586
226	-0.286	-0.841	-0.948	-0.918	-0.023	1.530	-0.047	0.700	-0.415	0.300	0.001	1.205	1.268
227	-2.106	-2.709	-1.699	-0.195	0.263	-1.033	-0.319	-0.223	-0.415	0.543	0.001	-0.669	0.804
228	0.234	0.093	0.554	1.251	0.549	-1.545	1.316	-0.223	-1.207	0.543	-1.062	-1.137	-0.122
229	-1.066	-2.086	-0.197	-1.641	-1.168	-0.520	-1.410	-2.070	-2.000	-2.378	0.001	-0.200	-3.829
230	0.494	0.404	0.179	0.528	0.263	0.505	1.044	1.162	-0.415	0.786	0.710	-0.200	-0.586
231	-0.286	1.338	1.681	1.251	0.835	0.505	0.771	0.700	0.773	-0.187	0.710	-0.200	1.268
232	-0.546	-0.841	0.179	0.528	0.263	-0.520	-0.047	-0.223	0.773	0.543	0.710	0.268	0.341
233	0.234	0.093	1.305	-0.195	0.263	-0.008	1.044	0.239	0.377	0.786	1.065	0.268	0.341
234	1.014	1.338	-0.197	0.890	0.835	1.018	1.044	0.239	1.169	0.300	0.356	0.268	-0.122
235	0.494	-0.219	-0.572	0.528	-0.882	1.018	0.226	0.700	-0.019	0.786	1.065	0.268	0.341
236	0.494	0.404	0.930	0.528	0.549	-0.008	-0.047	-1.147	-0.811	0.786	-0.353	-1.605	0.341
237	0.494	-0.219	0.930	0.167	0.549	-0.008	0.771	-1.147	-0.811	0.056	-0.708	-2.074	-0.122
238	-0.026	-0.841	-0.572	0.167	1.121	0.505	0.226	-0.223	-0.415	0.786	-0.353	-1.605	-1.049
239	-2.106	-1.775	0.930	-0.556	0.263	-0.520	0.499	-0.223	-0.415	0.786	-0.353	-1.605	-0.122
240	0.494	1.026	1.681	0.528	0.835	0.505	0.499	0.700	0.773	1.273	1.419	0.268	0.804
241	0.494	0.715	1.305	1.251	-0.023	-0.520	-0.319	0.239	0.773	1.030	1.419	1.205	0.341
242	-0.026	-0.219	-0.197	-0.918	-0.882	-1.033	-0.319	-0.685	-0.019	0.543	0.356	0.268	0.804
243	-0.546	-0.530	0.930	0.528	1.693	1.018	0.499	0.239	-0.415	0.786	-0.353	-0.200	-0.122
244	-3.405	-3.643	-0.572	-0.918	-1.454	-2.058	-0.047	-1.147	-1.603	-0.187	-1.417	-1.605	-1.976

245	1.274	-0.219	0.554	-0.556	-1.740	-0.008	-1.682	0.239	0.377	0.543	0.001	0.268	0.341
246	-0.546	-0.841	-0.948	-0.195	-0.023	-0.520	0.771	-1.147	-0.415	0.543	0.001	-0.669	-0.586
247	0.754	0.093	-0.197	-0.556	-0.023	-0.008	-1.137	0.239	0.773	1.030	0.356	0.268	-0.122
248	-2.106	0.404	0.554	-1.641	-1.168	-2.571	-1.410	-1.147	-3.188	0.056	-1.062	-2.074	-0.122
249	-0.546	0.093	-0.572	-0.195	0.263	-0.520	-0.319	-0.685	-0.415	-0.918	-1.062	-0.669	-0.586
250	-0.546	0.093	0.179	-0.195	0.263	-0.520	-0.319	-0.685	-0.415	-0.918	-1.062	-0.669	-0.586
251	0.754	0.404	-1.323	1.251	1.407	1.530	0.771	1.624	1.169	1.273	1.419	1.205	1.268
252	-0.026	0.404	1.305	0.890	1.121	1.018	0.226	-0.223	-0.415	0.786	-0.353	-0.669	-0.122
253	0.494	-0.219	0.930	-0.195	-1.454	-0.520	-0.864	-0.223	-1.603	-1.648	-1.417	-1.137	0.341
254	-1.326	-1.464	-1.323	-0.195	-0.310	-0.520	-0.592	-1.147	-1.207	0.300	0.001	-0.669	-0.586
255	-0.286	0.093	-0.948	0.167	0.549	1.018	1.316	0.700	0.377	0.300	1.065	1.205	-0.586
256	1.274	0.404	0.930	0.890	0.549	1.018	0.771	1.162	1.169	0.056	0.356	1.205	1.268
257	1.014	0.715	0.554	1.251	1.693	1.530	1.862	1.624	0.377	-0.187	0.001	-0.669	0.804
258	1.014	0.715	0.554	1.251	1.693	1.530	1.862	1.624	0.377	-0.187	0.001	-0.669	0.804
259	0.234	-0.530	-0.948	-0.556	-1.740	1.530	0.771	0.700	1.169	-2.378	-1.417	1.205	1.268
260	-0.806	-1.152	0.179	-0.918	-0.023	-0.520	-0.047	-0.223	-1.207	0.056	-0.353	-1.605	-1.049
261	0.234	-1.464	-1.699	-1.279	-0.882	-1.545	-0.319	-1.147	-1.207	0.300	0.001	-0.669	-2.439
262	-0.806	0.093	-1.699	-1.641	-0.023	-0.520	-0.864	-0.223	-0.415	0.056	-0.708	-1.605	-1.512
263	-0.806	-1.152	-0.572	-2.002	-1.168	-1.033	-0.592	-1.147	-1.603	0.300	0.001	-0.669	-0.586
264	1.534	0.093	0.179	-2.002	-0.310	-0.008	0.499	0.700	1.169	-2.135	0.356	1.205	0.804
265	1.274	0.404	0.930	0.890	0.549	1.018	1.316	1.624	0.773	-1.405	1.419	1.205	1.268
266	1.534	1.649	1.681	1.613	1.979	1.530	1.862	1.624	1.169	1.517	1.419	1.205	1.268
267	1.274	1.649	-0.197	1.613	0.835	1.018	-0.319	-2.070	-1.603	0.543	0.001	-0.669	-0.122
268	1.534	0.404	0.554	1.613	1.693	1.018	-0.047	1.624	1.169	1.517	1.419	1.205	1.268
269	1.534	0.404	0.554	1.613	1.693	1.018	0.226	1.624	1.169	1.517	1.419	1.205	1.268

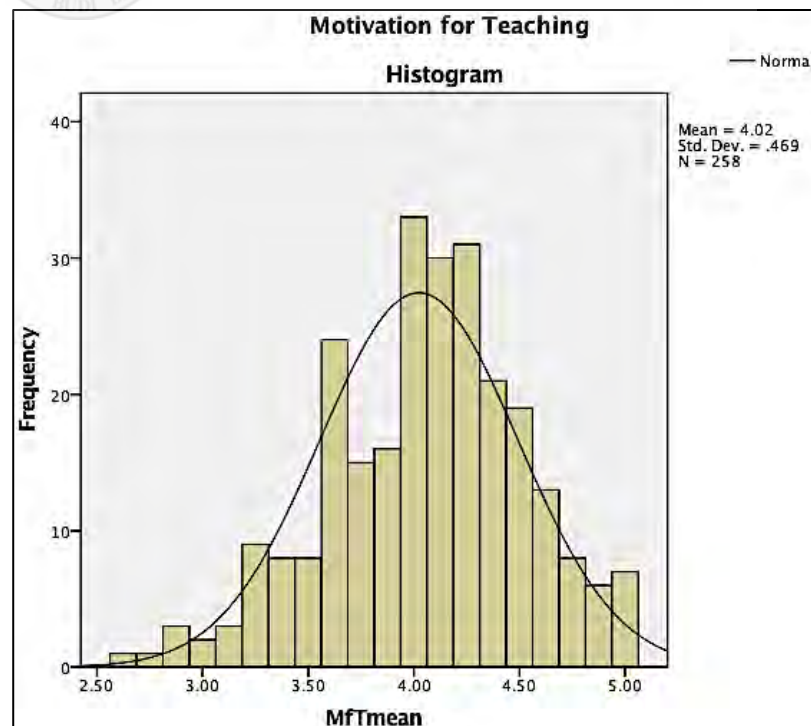
Appendix F

Histogram and normal probability plots

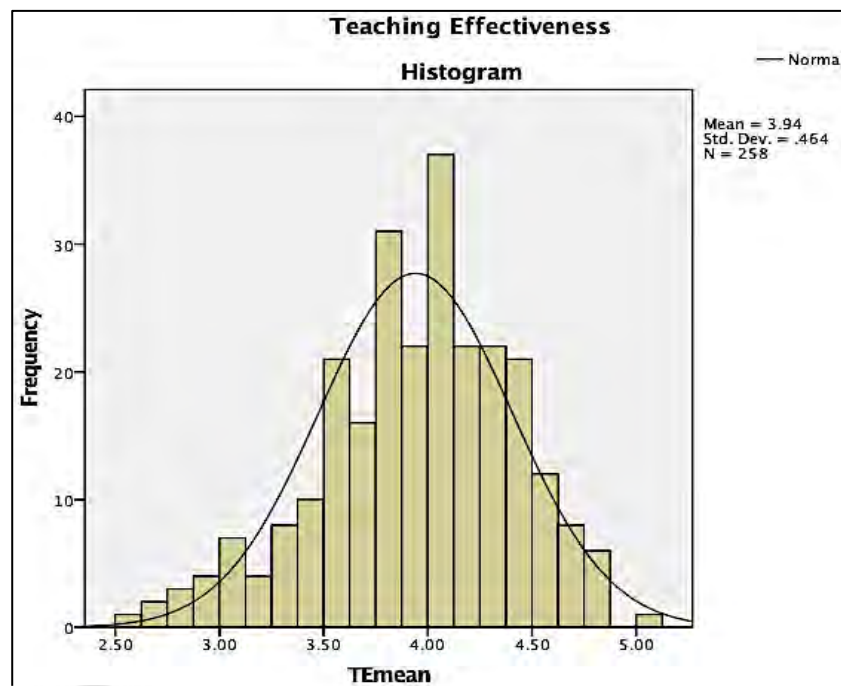
i: Classroom Management Strategies (CMS)



ii: Motivation for Teaching (MT)



iii: teaching effectiveness (TE)



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Appendix G

Items loading after individual item reliability

Loadings for each items after individual item reliability

No.	Items	Loadings	No.	Items	Loadings
1	cms10s	0.746	29	m62i	0.691
2	cms12s	0.741	30	te21evm	0.811
3	cms13s	0.756	31	te22evm	0.844
4	cms14s	0.693	32	te23evm	0.800
5	cms15s	0.705	33	te24evm	0.615
6	cms17c	0.948	34	te25evm	0.680
7	cms18c	0.618	35	te26as	0.781
8	cms3p	0.593	36	te27as	0.791
9	cms4p	0.771	37	te28as	0.729
10	cms5p	0.698	38	te29as	0.764
11	cms6p	0.729	39	te30as	0.633
12	cms8p	0.696	40	te31ap	0.767
13	cms9p	0.745	41	te32ap	0.753
14	m47ex	0.856	42	te33ap	0.697
15	m48ex	0.879	43	te34ap	0.695
16	m49ex	0.826	44	te35tno	0.841
17	m50ex	0.773	45	te36tno	0.849
18	m51b	0.524	46	te37tno	0.789
19	m52b	0.836	47	te38tno	0.758
20	m53b	0.872	48	te39st	0.696
21	m54b	0.663	49	te40st	0.807
22	m55s	0.793	50	te41st	0.736
23	m56s	0.854	51	te42st	0.791
24	m57s	0.764	52	te43c	0.775
25	m58s	0.832	53	te44c	0.859
26	m59i	0.748	54	te45c	0.842
27	m60i	0.813	55	te46c	0.860
28	m61i	0.818			

Appendix H

Items loading after convergent validity

Loadings for each items after individual item reliability

No.	Items	Loadings	No.	Items	Loadings
1	cms10s	0.746	28	m62i	0.688
2	cms12s	0.741	29	te21evm	0.812
3	cms13s	0.756	30	te22evm	0.844
4	cms14s	0.693	31	te23evm	0.799
5	cms15s	0.705	32	te24evm	0.616
6	cms17c	0.948	33	te25evm	0.679
7	cms18c	0.618	34	te26as	0.782
8	cms3p	0.593	35	te27as	0.793
9	cms4p	0.771	36	te28as	0.730
10	cms5p	0.698	37	te29as	0.763
11	cms6p	0.729	38	te30as	0.630
12	cms8p	0.696	39	te31ap	0.767
13	cms9p	0.745	40	te32ap	0.753
14	m47ex	0.833	41	te33ap	0.695
15	m49ex	0.820	42	te34ap	0.697
16	m50ex	0.835	43	te36tno	0.806
17	m51b	0.517	44	te37tno	0.833
18	m52b	0.835	45	te38tno	0.799
19	m53b	0.872	46	te39st	0.697
20	m54b	0.668	47	te40st	0.807
21	m55s	0.793	48	te41st	0.737
22	m56s	0.854	49	te42st	0.789
23	m57s	0.762	50	te43c	0.776
24	m58s	0.832	51	te44c	0.859
25	m59i	0.749	52	te45c	0.842
26	m60i	0.814	53	te46c	0.861
27	m61i	0.818			

Appendix I

Mean and SD of each items

Items	mean	SD	Items	mean	SD	Items	mean	SD
CMS pre1	4.40	0.611	TE evm21	3.99	0.748	MT ex47	3.76	1.107
CMS pre2	4.18	0.625	TE evm22	4.21	0.704	MT ex48	3.48	1.191
CMS pre3	4.18	0.637	TE evm23	4.11	0.708	MT ex49	3.08	1.36
CMS pre4	4.63	0.538	TE evm24	4.28	0.655	MT ex50	3.61	1.169
CMS pre5	4.34	0.636	TE evm25	4.2	0.627	MT intro51	3.47	1.19
CMS pre6	4.34	0.584	TE ass26	3.52	0.963	MT intro52	4.06	0.976
CMS pre7	4.28	0.578	TE ass27	3.59	1.056	MT intro53	4.1	0.915
CMS pre8	4.53	0.625	TE ass28	3.34	0.974	MT intro54	4.48	0.619
CMS pre9	4.4	0.605	TE ass29	3.83	0.77	MT iden55	4.31	0.64
CMS sup10	4.57	0.589	TE ass30	3.98	0.748	MT iden56	4.33	0.644
CMS sup11	4.16	0.922	TE app31	4.26	0.653	MT iden57	4.38	0.702
CMS sup12	4.4	0.578	TE app32	4.39	0.603	MT iden58	4.47	0.624
CMS sup13	4.58	0.594	TE app33	3.97	0.68	MT in59	4.31	0.659
CMS sup14	4.43	0.669	TE app34	4.47	0.624	MT in60	4.31	0.653
CMS sup15	4.47	0.631	TE tno35	3.5	1.085	MT in61	4.49	0.606
CMS sup16	3.24	1.35	TE tno36	3.38	1.075	MT in62	4.25	0.766
CMS cor17	4.29	0.709	TE tno37	3.58	1.107			
CMS cor18	3.88	0.854	TE tno38	2.8	1.205			
CMS cor19	2.03	1.148	TE ts39	4.2	0.665			
CMS cor20	2.39	1.176	TE ts40	4.16	0.652			
			TE ts41	4.21	0.638			
			TE ts42	4.04	0.753			
			TE less43	4.26	0.706			
			TE less44	4.26	0.699			
			TE less45	4.33	0.709			
			TE less46	4.28	0.752			

Appendix J

Stratified Random Sampling Technique

Step 1

Determine the total teacher population in large government primary school physical education teachers at Southern Thailand (N = 699)

Step 2

Krejcie and Morgan's (1970) sampling table is 248 physical education teachers (N = 248)

Step 3

Break population (N = 699) into 14 provinces of Southern Thailand and calculate the number of teacher based on populations and sample size

1. Nahorn Sri Thammarat $(92/699) \times 248 = 33$

2. Narathiwat $(107/699) \times 248 = 38$

3. Phatthalung $(16/699) \times 248 = 6$

4. Chumpon $(43/699) \times 248 = 15$

5. Songkhla $(87/699) \times 248 = 31$

6. Surat Thani $(70/699) \times 248 = 25$

7. Pattani $(42/699) \times 248 = 15$

8. Krabi $(38/699) \times 248 = 13$

9. Phuket $(44/699) \times 248 = 16$

10. Trang $(38/699) \times 248 = 13$

11. Phang-nga $(14/699) \times 248 = 5$

12. Yala $(77/699) \times 248 = 27$

13. Ranong $(21/699) \times 248 = 7$

14. Satun $(10/699) \times 248 = 4$

Step 4

calculation of sample size (248)

Step 5

calculation oversampling
20% of sample size
 $(248+50 = 298)$

Step 6

Return Questionnaires (269)

Step 7

Questionnaire not Return (29)

Step 8

Incomplete Questionnaires (11)

Step 9

Retained questionnaires (258)